

What is claimed is:

1 1. A method for determination of and compensation
2 for the scale factor error caused by changes in the
3 wavelength in a multiple axis fiber-optic gyroscope (FOG)
4 which is fed from a common light source, in a GPS-supported
5 inertial track and attitude reference system which is
6 equipped with a Kalman correction filter, characterized in
7 that the scale factor error determined for one axis with
8 relatively fast motion dynamics is used as the Kalman filter
9 correction value for the scale factor error correction for
10 all the measurement axes of the fiber optic gyro with slower
11 motion dynamics.

1 2. A method as claimed in Claim 1 for a three-axis
2 track and attitude reference system, characterized in that
3 scale factor error determined for the vertical axis (z) is
4 used for scale factor error correction, for error
5 compensation for the other measurement axes (x, y).

1 3. A method as claimed in Claim 1 or 2,
2 characterized in that the error correction to be implemented
3 with the aid of the scale factor determined for the axis with
4 comparatively fast motion dynamics is used with a time
5 constant which is long in comparison to expected short-term
6 error sources which cannot be modulated or compensated for.